

Climate Summary for Florida – December 2020

Prepared by the Florida Climate Center, The Florida State University, Tallahassee, Florida

Online at: <http://climatecenter.fsu.edu/products-services/summaries>

Average temperatures in December were below normal across the state, finishing the year on a slightly cooler note. Departures from normal across the state ranged from +0.6 °F in Pensacola to -5 °F in Titusville (see Table 1 and Appendix 1 for select cities). Average maximum temperatures were near or slightly below normal across much of the state, while average minimum temperatures were well below normal, as much as -5 °F to -6 °F in central Florida. Many records were set for lowest daily maximum temperatures during the month, as well as lowest daily minimum temperatures (Appendices 2-3). Only one daily high maximum temperature record was set and that was in Ft. Lauderdale Beach with a record 85 °F set on the 1st of the month (beating the previous record of 84 °F set in 2016); no daily high minimum temperature records were set.

Table 1. December average temperatures and departures from normal (°F) for selected cities.

Station	Mean Temperature	Departure from Normal
Pensacola	54.1	+0.6
Tallahassee	51.2	-2.0
Jacksonville	52.7	-2.5
Orlando	59.4	-3.2
Tampa	61.2	-1.9
Miami	69.4	-1.1
Key West	70.0	-1.4

Rainfall totals in December were slightly below or below average across most of the state. Monthly departures from normal ranged from approximately -0.5 inches in Jacksonville and Gainesville to -1.85 inches in Melbourne (Table 2 and Appendix 1). While December was dry overall, there were exceptions. The southwestern peninsula experienced a surplus of precipitation, with departures from normal ranging from +0.5 inches in Fort Myers to +1.5 inches in Punta Gorda. Pensacola also recorded a surplus of precipitation with +0.21 inches. Despite below normal precipitation in most areas, several daily rainfall records were set, mostly on the 7th, 16th, and 17th of the month.

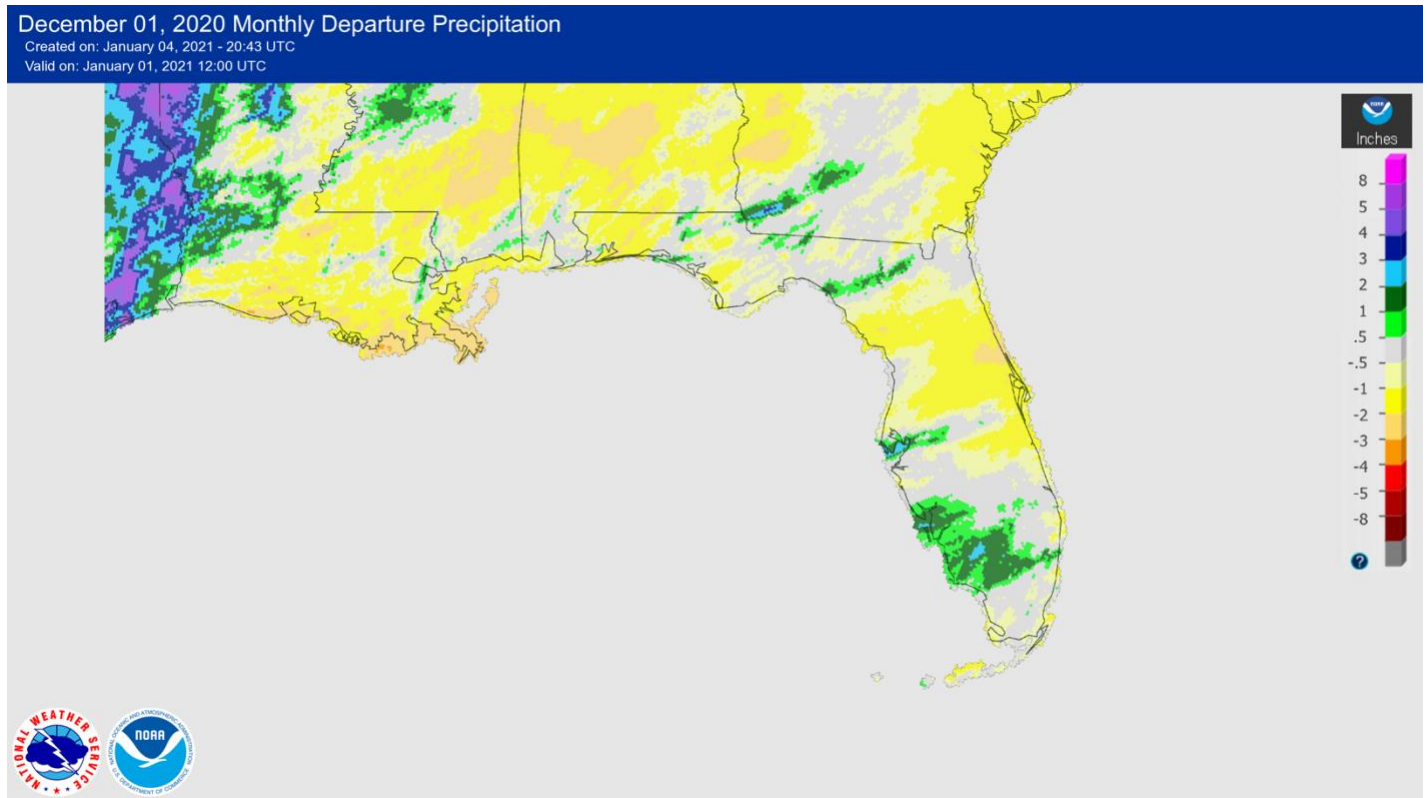
Table 2. December precipitation totals and departures from normal (inches) for selected cities.

Station	Total Rainfall	Departure from Normal
Pensacola	4.76	+0.21



Tallahassee	3.17	-0.73
Jacksonville	2.34	-0.46
Orlando	1.04	-1.54
Tampa	2.79	+0.32
Miami	1.60	-0.44
Key West	1.45	-0.77

Figure 1. A graphical depiction of the monthly rainfall departure from normal (inches) for December (courtesy of NOAA).



La Niña Conditions in the Pacific.

La Niña conditions persisted in the tropical Pacific in December, as indicated by well below-average sea surface temperatures in the eastern Pacific Ocean. La Niña is forecasted to continue through the winter and early spring from January to March (~95% chance) with a potential change in spring (~50% chance of Neutral during April-June). As La Niña conditions persist, above-average temperatures and drier than average conditions are expected to continue across the southern tier of the U.S. over the next few months.

Hazardous Weather Events in December.

There were 169 individual local reports of hazardous weather events recorded in Florida during the month of December (see Table 4 for a breakdown by event type). A strong cold front moved through the state on the 24th and 25th, bringing thunderstorms and strong winds with reports of wind gusts as high as 40+ mph across much of the state ahead of the front. There were multiple reports of downed trees across northern Florida. Tornadoes were also reported mid-month in the Tampa and Lakeland areas.

Table 4. Breakdown of storm reports submitted in Florida during the month of December (compiled from Iowa State University/Iowa Environmental Mesonet).

Report Type	Number of Reports
Marine Thunderstorm Wind	36
Non-Thunderstorm Wind Damage	1
Non-Thunderstorm Wind Gust	22
Tornado/Waterspout/Funnel Cloud	13/1/0
Thunderstorm Wind Damage	44
Thunderstorm Wind Gust	51
Hail	0
Rip Currents	1

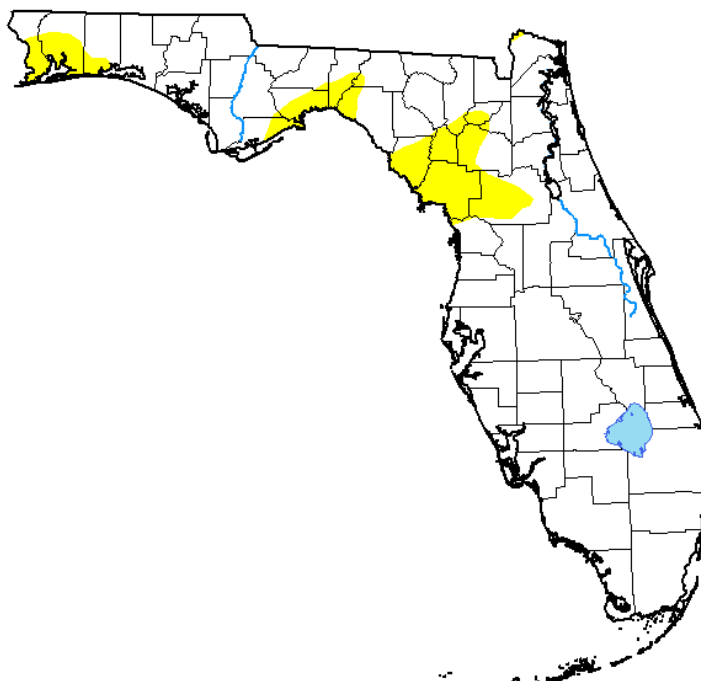
Drought-Related Impacts.

Drought did not impact any part of the state in December. However, by the end of December, 10.7% of the state was experiencing abnormally dry conditions (D0) compared to 0.8% at the beginning of the month, according to the U.S. Drought Monitor. The abnormally dry conditions impacted parts of the Panhandle and northwestern portions of the peninsula. The seasonal drought outlook indicates that drought development is likely through March 2021 in north Florida, including the Panhandle.

As of December 31, the Lake Okeechobee water level was at 15.81 ft. above sea level (Feet-NGVD29), which is above average for this time of the year. At the beginning of December, the water level was about 16 ft. above sea level.

**U.S. Drought Monitor
Florida**

December 29, 2020
(Released Thursday, Dec. 31, 2020)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	89.27	10.73	0.00	0.00	0.00	0.00
Last Week 12-22-2020	87.97	12.03	0.00	0.00	0.00	0.00
3 Months Ago 09-29-2020	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year 12-31-2019	75.86	24.14	8.59	0.00	0.00	0.00
Start of Water Year 09-29-2020	100.00	0.00	0.00	0.00	0.00	0.00
One Year Ago 12-31-2019	75.86	24.14	8.59	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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Agriculture-Related Impacts.

The weekly [Crop Progress and Condition reports](#) published by the USDA’s National Agricultural Statistics Service are produced during the growing season months only, from April to November. The [Crop Progress – State Stories](#), produced monthly December through March, indicate that pasture conditions remained mostly fair to good throughout the month. In early December, frosts caused damage to several pastures in the Panhandle and parts of the northern peninsula. Cattle conditions were good or excellent throughout the month, and cotton harvesting finished later than normal during the final week of December. Citrus activities were normal.

Appendix 1. Additional December departures from normal data for select Florida locations (source: NWS).

Station	Average Temperature (°F)	Departure from Normal (°F)	Total Rainfall (in.)	Departure from Normal (in.)
Gainesville	53.2	-2.9	1.89	-0.49
Sarasota	62.7	-0.8	1.93	-0.6
Melbourne	61.1	-1.9	0.72	-1.85
Fort Myers	64.8	-1.7	2.24	+0.53

Appendix 2. Select daily record low maximum temperatures tied or broken during December (compiled from NOAA).

Location	Date	Record (°F)	Broken/Tied	Last
Miles City	1	67	Broken	71 in 1999
Tallahassee	1	51	Tied	51 in 1964
Fort Lauderdale	2	65	Broken	66 in 1925
Hialeah	2	66	Broken	67 in 1965
Perrine	2	66	Broken	69 in 2008
Sanford	2	57	Broken	58 in 1979
Stuart	2	62	Broken	67 in 1999
Vero Beach	2	60	Broken	64 in 1979
Wauchula	3	58	Broken	63 in 2010
Tampa	8	57	Broken	59 in 2010
Miles City	8	64	Broken	66 in 2010
Orlando	8	57	Broken	60 in 2010
Miami	8	64	Broken	65 in 2010
West Palm Beach	8	63	Broken	65 in 1973
Ft. Lauderdale Beach	9	63	Broken	66 in 2010
Perrine	9	63	Broken	66 in 1997
Marianna	17	46	Tied	46 in 1953
Titusville	19	56	Tied	56 in 1974
Bradenton	26	52	Broken	53 in 1989
Stuart	26	54	Broken	56 in 1983
Fort Pierce	27	53	Broken	54 in 2001
Naples	27	60	Broken	61 in 2010
Perrine	27	62	Broken	64 in 1995
Stuart	27	59	Tied	59 in 1995

Appendix 3. Select daily record low minimum temperatures tied or broken during December (compiled from NOAA).

Location	Date	Record (°F)	Broken/Tied	Last
Mountain Lake	1	29	Broken	31 in 1945
Tarpon Springs	2	30	Broken	33 in 1957
Marianna	2	28	Broken	29 in 1999
Lakeview	2	38	Broken	39 in 1960
Crestview	2	23	Broken	24 in 2002
Jacksonville	2	33	Broken	34 in 1957
Tarpon Springs	3	30	Tied	30 in 1910
Tarpon Springs	9	30	Tied	30 in 1984
Vero Beach	9	38	Tied	38 in 1984
West Palm Beach	9	44	Broken	45 in 1968
Orlando	9	37	Broken	42 in 2017
Perrine	10	39	Broken	42 in 1996
Tarpon Springs	10	30	Broken	31 in 1955
Tarpon Springs	18	26	Broken	27 in 1901
Marianna	25	28	Broken	29 in 2000
Marianna	26	25	Broken	26 in 1999
Orlando	26	34	Tied	34 in 2010
Gainesville	27	24	Broken	25 in 1985